

Ausgabe September 1979

Service Manual

1256 · 1257



Technical Data

Current type

Line voltage

Drive

Power consumption

Platter

Platter speeds

Pitch control

Wow and flutter

Signal-to-noise-ratio

(according to DIN 45 500)

Tonearm

Tonearm bearing friction

(in relation to stylus tip)

Tracking force

Pick-up head

Weight

AC 50 or 60 Hz convertible by changing the drive capstan and the motor.

115 and 230 V changeable or 12 V~

Please also note the voltage details of the type plate on the underside of the turntable.

Dual 16 pole synchronous motor via flat belt to flywheel rotor

Maximum 8 watt

Aluminium platter 270 mm ϕ , 0.9 kg

33 1/3 and 45 rpm, automatic tonearm setdown coupled to speed selector

Adjustment at 33 1/3 rpm. Approximately 1 semi-tone (6 %) at both platter speeds

$< \pm 0.1$ % rated in accordance with DIN 45 507

$< \pm 0.05$ % WRMS

Rumble unweighted signal-to-noise-ratio > 46 dB

Rumble signal-to-noise-ratio > 68 dB

Torsion-resistant aluminium tubular tonearm in four point gimbal suspension.

Vertical < 0.08 mN (0.008 g)

Horizontal < 0.16 mN (0.016 g)

0 – 30 mN (0 – 3 g) continuously variable, reliable as from 5 mN (0.5 g) tracking force

With 1/2 inch screw-in mounting may be provided with special accessory number 261 865, available in HiFi shops.

1256 approximately 5.0 kg 1257 approximately 5.2 kg

WIZTRONICS, INC.

FEB 80

Dual

Ausgabe September 1979

Service Manual

1256 · 1257



Technical Data

Current type
Line voltage

Drive
Power consumption
Platter
Platter speeds
Pitch control
Wow and flutter

Signal-to-noise-ratio
(according to DIN 45 500)

Tonearm
Tonearm bearing friction
(in relation to stylus tip)
Tracking force
Pick-up head

Weight

AC 50 or 60 Hz convertible by changing the drive capstan and the motor.

115 and 230 V changeable or 12 V~

Please also note the voltage details of the type plate on the underside of the turntable.

Dual 16 pole synchronous motor via flat belt to flywheel rotor

Maximum 8 watt

Aluminium platter 270 mm ϕ , 0.9 kg

33 1/3 and 45 rpm, automatic tonearm setdown coupled to speed selector

Adjustment at 33 1/3 rpm. Approximately 1 semi-tone (6 %) at both platter speeds

$< \pm 0.1$ % rated in accordance with DIN 45 507

$< \pm 0.05$ % WRMS

Rumble unweighted signal-to-noise-ratio > 46 dB

Rumble signal-to-noise-ratio > 68 dB

Torsion-resistant aluminium tubular tonearm in four point gimbal suspension.

Vertical < 0.08 mN (0.008 g)

Horizontal < 0.16 mN (0.016 g)

0 – 30 mN (0 - 3 g) continuously variable, reliable as from 5 mN (0.5 g) tracking force

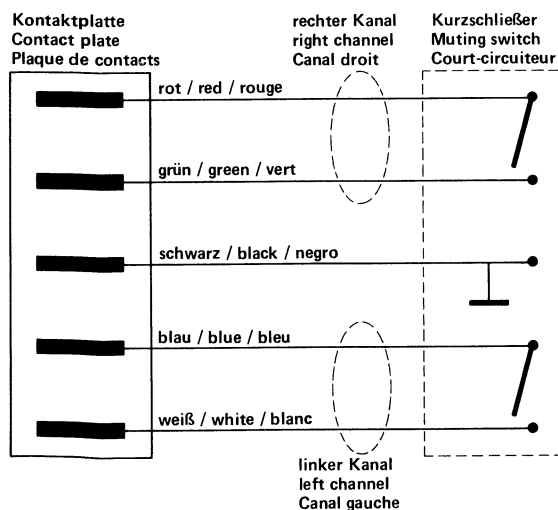
With 1/2 inch screw-in mounting may be provided with special accessory number 261 865, available in HiFi shops.

1256 approximately 5.0 kg 1257 approximately 5.2 kg

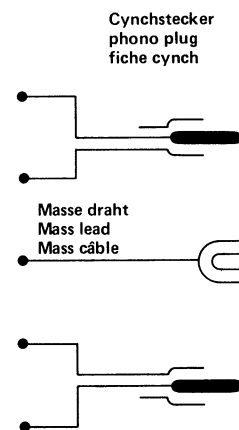
Contents

Page	
1	Technical data
2	Pick-up wiring diagram
3	Motor and drive
3	Speed changeover
3	Platter
3	Flat belt
3	Changing the motor pulley
4	Stroboscope
4	Pitch control
4	Tonearm and tonearm bearing
4	Adjustment of tonearm bearing
4	Removal of tonearm complete with tonearm bearing 1256
5	Removal of tonearm or spring housing 1256
5	Removal of tonearm complete with tonearm bearing 1257
5	Exchanging the tonearm or spring housing 1257
5	Fitting 1/2 inch pick-up
6	Antiskating device
6	Cueing device
6	Changing the cueing device plate
6	Tonearm
7	Starting
7	Manual start
7	Muting switch
7	Stopping
7	Record drop
8	Shut-off and change cycle
8	Shut-off mechanism
8	Adjustment points:
	Tonearm set-down point
8	Switch-off position
8	Release rocker
9	Tonearm vertical lift
9	Tonearm does not set down or lowers onto record too quickly
9	Rated speed reaches limit of adjustment
9 – 12	Replacement parts with exploded view
13	Lubricating instructions

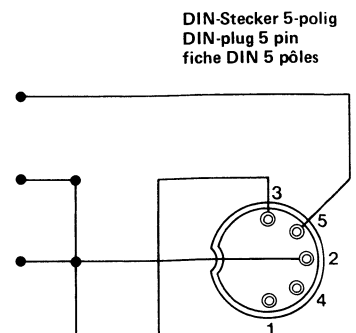
Fig. 1 Pick-up Connection Diagramm



a) With cynch jack



b) With DIN jack



Motor and Drive

Power for the turntable platter and the changing mechanism is supplied by a split 16-pole synchronous motor (130). The motor is adapted to 50 or 60 cycle (Hz) power line frequencies by the correct choice of the motor pulley (116).

Pulley for 50 Hz, Part No. 261 938

Pulley for 60 Hz, Part No. 261 939

Capacitor (C 3) on printed circuit (136) should either be soldered in or removed.

Conversion to the given line voltage should be carried out in accordance with the connection diagram (Fig. 5).

Speed changeover

Platter speeds of 33 1/3 and 45 rpm are adjusted by linking the flat belt (17) to the corresponding step of the motor pulley (116) (Fig. 3).

The speed switch lever is brought into the required position (33 or 45 rpm) by means of the speed selection lever (27), the switch lever (107) and the spring lever of the switch levers. If the machine is switched off, then the switch lever is interlocked by the stop lever (8). The speed is only pre-selected in this way. The stop lever (8) is only released when the platter (14) turns. This then moves the flat belt (17) onto the required step of the motor pulley (116).

Platter

The platter is secured to the securing disc (5) by the bayonet catch. When removing the platter (14) press the securing disc lightly downwards and turn it approximately 60° to the right until it is felt to click out of position.

Flat belt

As described above, the platter must be removed in order to change the flat belt (17). Remove the old flat belt. Place the new flat belt onto the running surface of the flywheel rotor (16).

Warning: The polished (matt) side of the belt must be in contact with the running surface. Replace the platter and lay the flat belt back over the motor pulley (116).

Changing the drive pulley

1. Remove the flat belt (17) and the toothed belt (108).
2. Detach tension spring (121) from shield (122).
3. Remove the hexagonal screw (111), the adjustment cam (112) the belt pulley (113) and the counter bearing (114).
4. Loosen grub screws (117) and remove motor pulley (116). Place the replacement motor pulley on the motor axle. Remove the taper bush. Take care with the interior spacing bush. Adjust the motor pulley vertically (see fig. 3) and tighten the grub screws (117) uniformly. Place the taper bush in the motor pulley (116).

Fig. 2

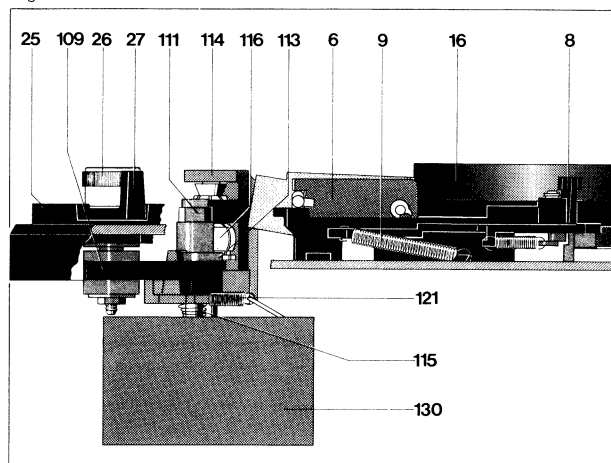


Fig. 3

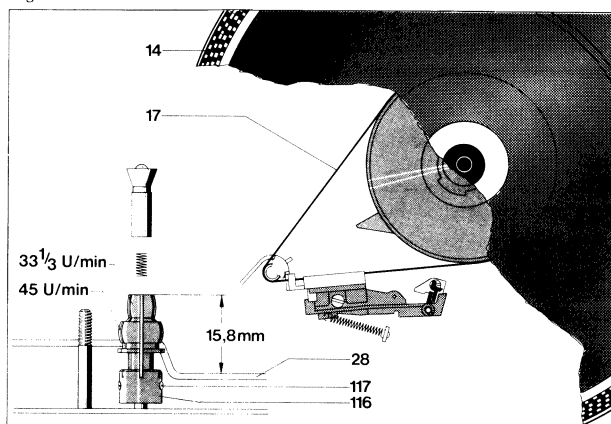


Fig. 4

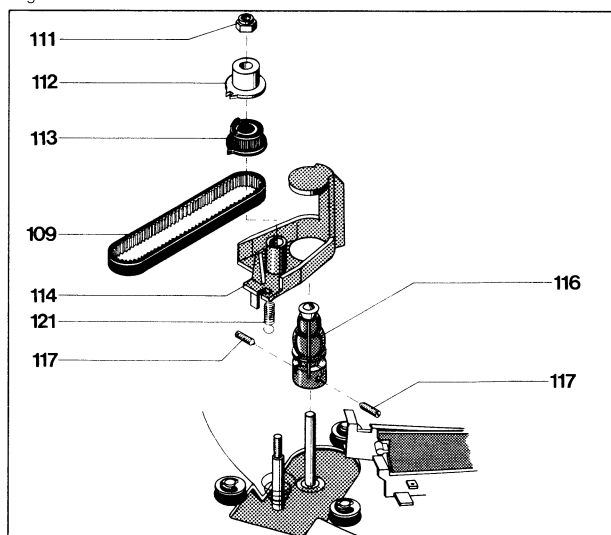


Fig. 5 Motor wiring diagram.

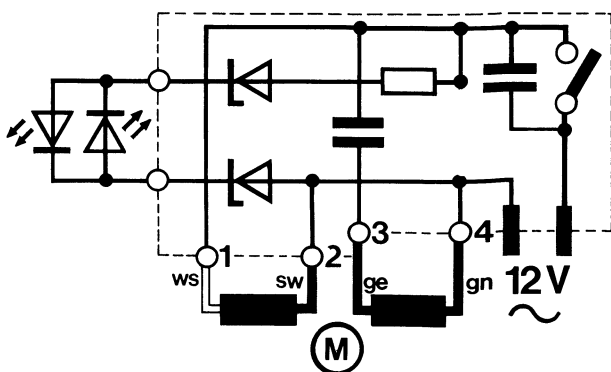
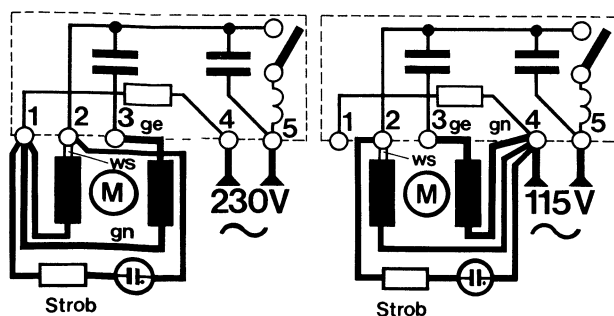


Fig. 6

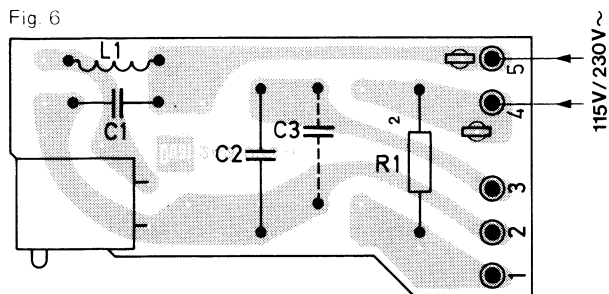


Fig. 7

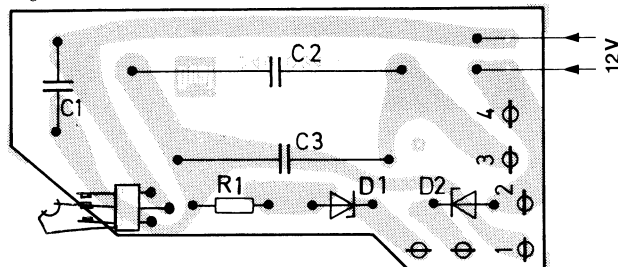


Fig. 8

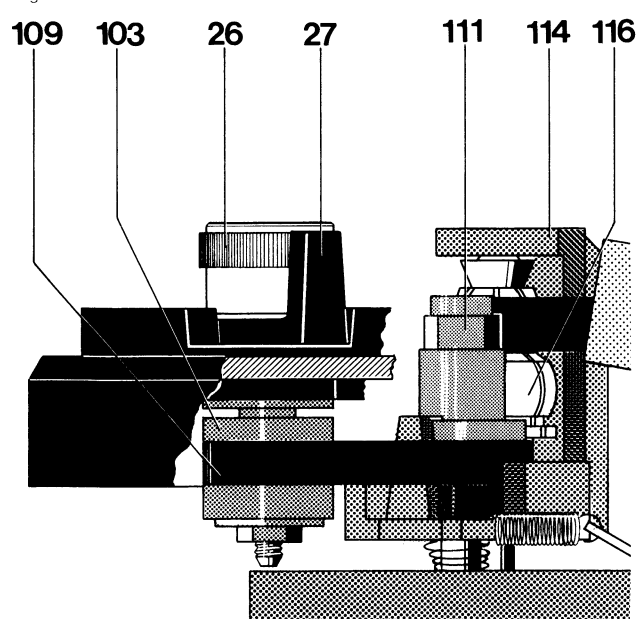
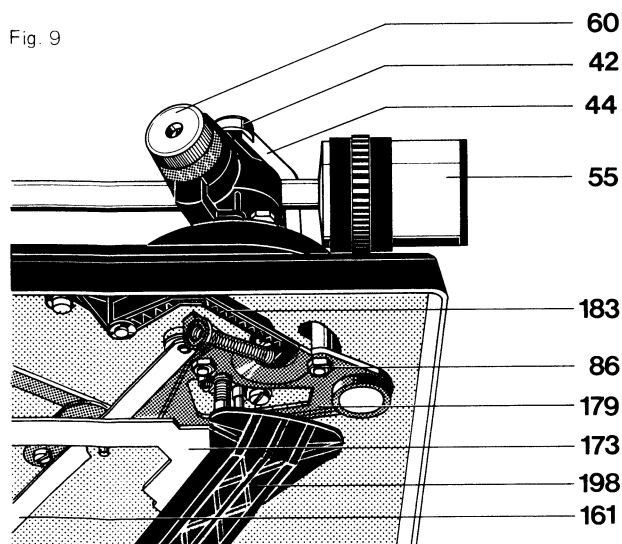


Fig. 9



- Counter bearing (114), belt pulley 2 (113) and adjustment cam (112) should now be fitted and the hexagonal head mounting screws (111) should now be tightened. Replace the tension spring (121) and the toothed belt (109). Fit the flat belt (17) onto the motor pulley.
- Set the belt pulley (113) to its central position by turning the adjustment knob (26). (The lug of the belt pulley should be evident in the middle of the drive pulley). Set the rated speed by means of the hexagonal screw (111). The rated speed may be increased by turning the hexagonal screw (111) in a clockwise direction. The rated speed may be decreased by turning the screw in an anti-clockwise direction.

Stroboscope

Accurate setting of the platter speed $33 \frac{1}{3}$ rpm can be checked during play with the aid of the stroboscope device. When the platter (14) is rotating at exactly $33 \frac{1}{3}$ rpm the lines of the stroboscope appear to stand still. Adjustment may be carried out with the "pitch" knob (26).

Pitch control

The unit has a separately adjustable pitch control. The two standard speeds $33 \frac{1}{3}$ rpm and 45 rpm can be varied by a maximum of 6 % (approximately 1 semitone). By turning the fine speed adjustment knob (26) the belt pulley 2 (103) can be moved. This rotation is transferred by means of the toothed belt (109) to the belt pulley 1 (Fig. 8), thus moving the counter bearing (114) and the taper bush of the drive pulley (116) upwards or downwards. The taper bush of the drive pulley (116) is designed to vary the diameter of the drive pulley thus varying the nominal speed within the tolerance of ± 3 %.

Tonearm and tonearm bearing

The light, torsion-resistant all metal tonearm is suspended in a gimbal. Suspension is by means of 4 hardened and precision polished steel points which rest in precision ball bearings. Tonearm bearing friction is thus reduced to a minimum.

Bearing friction vertical	< 0.08 mN (0.008 g)
Bearing friction horizontal	< 0.16 mN (0.016 g)

In relation to stylus tip.

Before adjusting the tracking force to suit the built-in pick-up cartridge the tonearm is balanced with the scale set to zero. Balancing is effected by turning the weight (55). The tracking force is effected by tensioning the coil spring attached to the spring housing (62). The spring housing (62) has graduated markings for a range of adjustment from 0 to 30 mN (0 - 3 g) which permit accurate adjustment of the tracking force.

Adjustment of the tonearm bearing

First balance the tonearm exactly. Both bearings must have slight, barely perceptible play. The horizontal tonearm bearing is correctly adjusted when antiskating is set at "0.5" and the tonearm slides from inside to outside without resistance. The vertical tonearm bearing is correctly adjusted when it swings in after being touched. The play of the horizontal tonearm bearing should be adjusted with the grub screw (43) while that of the vertical tonearm bearing should be adjusted with the grub screw (48). The Dual 1256 system is provided with a self adjusting tonearm point suspension.

Dismantling the tonearm complete with the tonearm bearing 1256

We recommend the following procedure:

- Secure the unit in a repair stand and turn the rotary turn switch (60) to the zero position. Lock the tonearm (38) in rest position. Remove the weight (55).
- Turn the unit over. Remove the protective plate (172). Unsolder the tonearm connections at the muting switch.

3. Remove the locking washer (89), pivot (175) and switch lever (198). After removing the locking washer (89) turn the adjusting screw (47) until the guide bearing (188) and arm positioning slide (173) are free. Swing the arm positioning slide (173) onto the flywheel rotor bearing assembly.
4. Disengage the tension spring (180). Remove the locking washer (88). Remove the shut-off slide (161) from the segment (179).
5. Remove both hexagonal screws (96). Grip the tonearm (38). Remove the segment (179). Remove the tonearm. Reassembly involves the reverse procedure.

Changing the tonearm or the spring housing 1256

1. Secure the unit in a repair stand. Turn the rotary turn switch (60) to zero position. Lock the tonearm (38). Remove the weight (55).
2. Turn the unit over. Remove the protective screen (172) and solder off the tonearm connections at the muting switch. Turn the unit the right way up.
3. Remove the fillister head screw (61). Take off the rotary turn switch (60) and washer (59).
4. Press the bearing (63) in the direction of the sprung bearing point (43), so that the tonearm (38) may be removed from the front of the bearing race (58). The spring housing (62) or the tonearm (38) can now be changed. For reassembly follow the reverse procedure.

Dismantling the tonearm complete with the tonearm bearing 1257

We recommend the following procedure:

1. Secure the unit in a repair stand. Turn the rotary turn switch (60) to the zero position. Lock the tonearm (38). Remove the counter-weight (55).
2. Turn the unit over. Remove the screening sheet (172). Unsolder the tonearm connections at the muting switch.
3. Take off the locking washer (89), the pivot (175) and the main lever (198). After removing the locking washer (89) turn the adjusting screw (47) until the guide bearing (188) and the arm positioning slide (173) are free. Swing the arm positioning slide (173) onto the flywheel rotor bearing assembly.
4. Disengage the tension spring (180). Remove the locking washer (88). Remove the shut-off slide (161) from the segment (179).
5. Remove both hexagonal screws (96). Loosen the countersunk head-screw (185) and the counter bearing (184). Remove the segment (179).
6. Grip the frame (44) and the tonearm (38). Loosen the machine screw (45) and take off the tonearm and frame.

Reassembly of the tonearm involves the reverse procedure. Take care that the grub screw (43) is correctly seated in the bearing when fastening the frame (44).

Changing the tonearm or the spring housing 1257

1. Secure the unit in a repair stand. Turn the rotary turn switch (60) to the zero position. Lock the tonearm (38). Remove the counterweight (55).
2. Turn the unit over. Remove the screening sheet (172) and solder off the tonearm connections at the muting switch. Turn the unit the right way up.
3. Remove the fillister head screw (61). Remove the rotary turn switch (60) and the washer (59).
4. Loosen the nut (56) and the grub screw (57). Draw the tonearm (38) complete with bearing (63) from the bearing race (58). The spring housing (62) or the tonearm (38) may now be changed.

Reassembly involves the reverse procedure.

Fitting a 1/2 inch cartridge

If a cartridge with 1/2 inch standard mount is to be fitted, the conversion kit (41) Number 261 865 is necessary. The proper method of fitting is shown in fig. 12.

Also the decorative cover (54) should be removed from the counterweight (55) and should be fitted with the compensatory weight to be found in the conversion kit (41).

Fig. 10

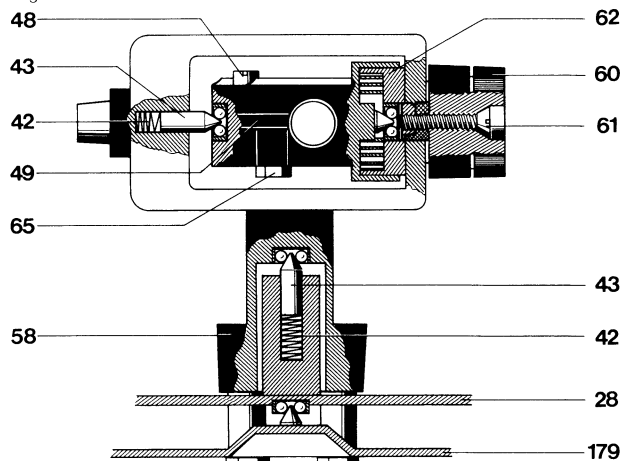


Fig. 11

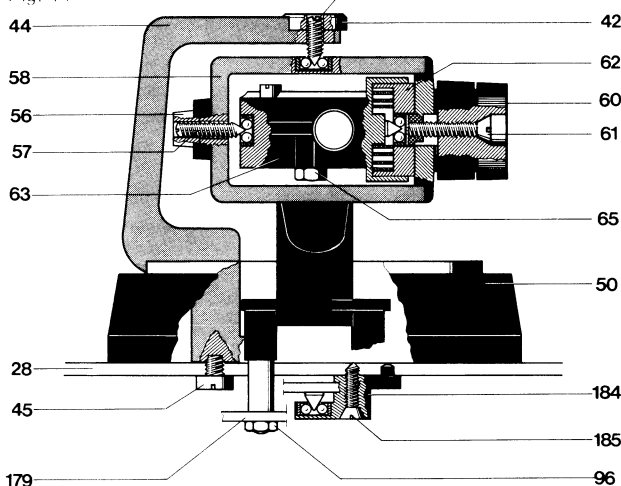


Fig. 12

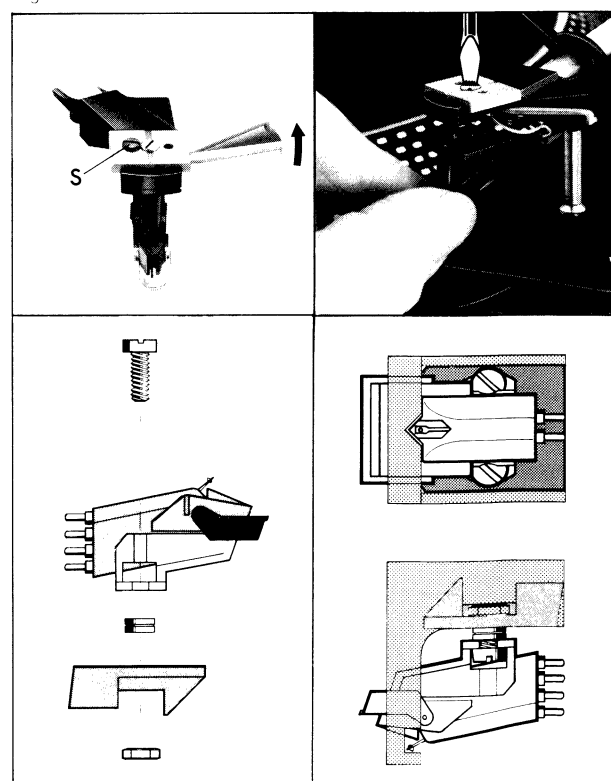


Fig. 13

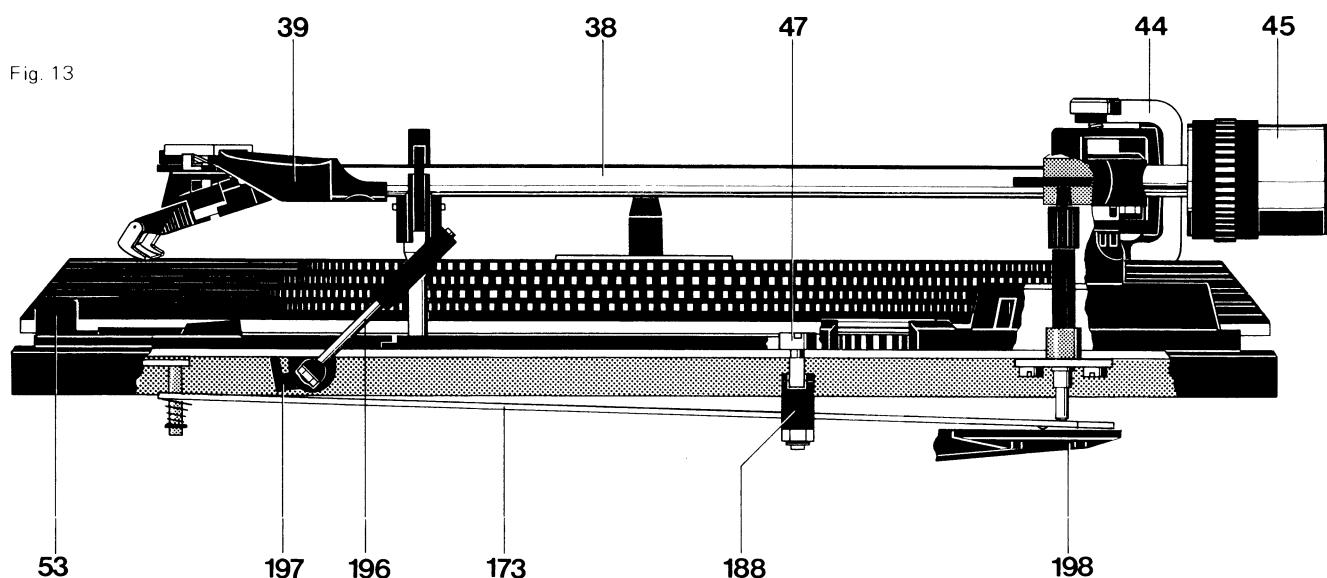
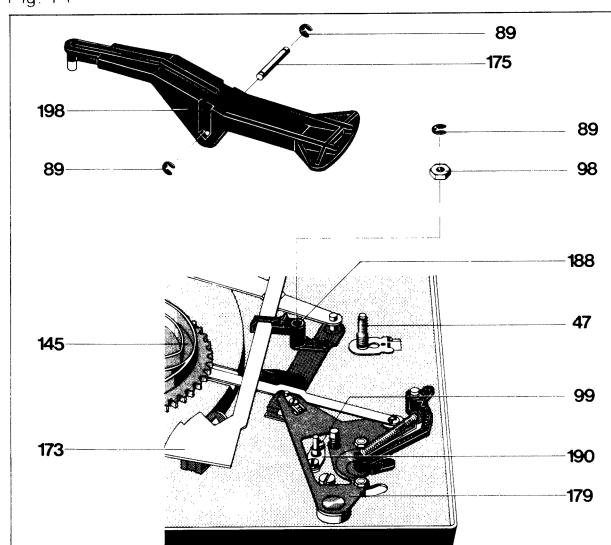


Fig. 14



Antiskating device

Adjustment of the antiskating force is made by turning the indicator disc located on the supporting back (50). The skating lever (183) is displaced from the tonearm fulcrum by an amount depending on the setting of this control. The antiskating force is transmitted to the tonearm (38) via the tension spring (180) and segment (179).

Optimum adjustment is carried out at the works for styli with a tip radius of $15 \mu\text{m}$ (spherical), and $5/6 \times 18/22 \mu\text{m}$ (elliptical). Any alteration can only be carried out with the aid of a Dual Skate-O-Meter and a test record and should only be done by an authorised servicing agent.

Cue control

Raising the lever (196) to position "▼" or "▲" moves the lift cam and the slide bar so that the tonearm is raised from the record (or lowered onto it). The cue control takes precedence over the automatic cueing device. If the unit is started with the arm lever in the "▼" position, then the tonearm is guided over the record by the cueing mechanism. Only when the arm lever (196) is brought to the position "▲" will the tonearm be lowered onto the record.

The vertical lift height can be adjusted by means of the adjustment screw (47) and should be 3 – 5 mm.

Changing the lift plate

When changing the lift plate (190), we recommend the following procedure:

1. Secure the unit in a repair stand and lock the tonearm in rest position. Turn the unit over.
2. Remove the lock washer (85) and pivot (175). Remove the main lever (198).
3. Remove the lock washer (89). Turn the adjustment screw (47) until the hexagonal screw (96) can be removed. Lift off the slide bar (173) and the guide bearing (188) and pivot towards the cam wheel (145).
4. Remove the two machine screws (99). Remove the complete lift plate (190).

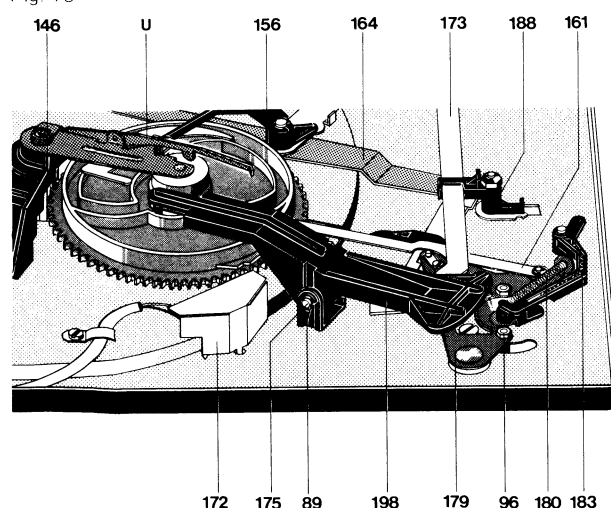
Reassembly involves the reverse procedure.

Tonearm control

Automatic movement of the tonearm is initiated by the control cams on the inside of the cam wheel (145) on rotating through 360° .

The control elements for raising and lowering are the main lever (198) and the lift bolt (190), for horizontal movement the main lever (198) and the segment.

Fig. 15



The automatic tonearm set-down mechanism is designed for 30 cm and 17 cm records and is coupled to the platter speed changeover. The set-down points of the tonearm are determined by the spring pin of the segment (179) contacting the slide bar (173). Limitation of the horizontal movement of the tonearm is produced by the pin of the segment contacting the slide bar (173). Only during set-down does the main lever (198) lift the slide bar and the stop attached to it which, as a result, moves into the swivel range of the stop pin fitted on the segment. After completion of set down (lowering of the tonearm onto the record) the slide bar (173) is released again and returns to neutral position. As a result the stop moves out of the swivel range of the stop pin so that unimpeded horizontal movement of the tonearm is possible for playing.

Start

Switching the switch lever (53) into the "start" position initiates the following sequence:

- The start lever rotates the switch lever (164) which is pivoted about the notched stud. At the same time, the switch arm (151) is moved and the motor (130), via the power switch, and the platter starts turning.
- Operating the switch lever (53) also releases the start slide (19) which is drawn towards the cam by means of the tension spring (18). This causes the shut-off lever on the cam to engage with the drive pinion and the cam turns.
- This switch lever (164) is coupled to the switch angle (156) and this is brought into the range of the shift lever so that the next rotation of the cam forces this into its starting position.

Manual start

The pawl (156) which is connected to the switch arm (151) engages in the four-sided plate when the tonearm is moved manually and retains the switch arm in this position.

The switch arm (151) connects the mains supply to the motor (130) and the platter (16) rotates.

When the run-out groove of the record is reached, the tonearm is lifted and the motor is switched off automatically. If, however, the tonearm is lifted off the record before the run-out groove, and returned by hand to the tonearm rest, then the bolt on the segment (179) disengages the pawl (156) so that the switch arm is returned to its starting position. This switches off the mains supply.

Stopping

When the switch lever is set to "stop" position the start slide (19) which is pulled towards the cam by means of the tension spring (18) is disengaged thereby moving the shut-off lever into contact with the platter pinion (PR) and moving the cam wheel (145). The cam follower lever remains in its stop position.

Record drop

According to centre hole diameter (7 or 38 mm) either interchangeable spindle AW 3 or automatic spindle AS 12 are intended for stacking and dropping records.

The record drop is initiated by the cam wheel (145) whose drop cam surface (AK) controls the release rocker (AW) and the changer actuator rod. (Fig. 17).

The resultant downward movement initiates record drop via the changing spindle or automatic spindles.

Fig. 16

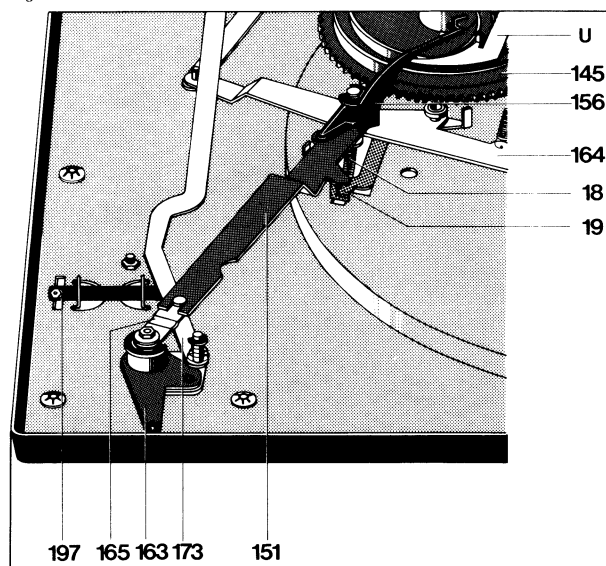


Fig. 17

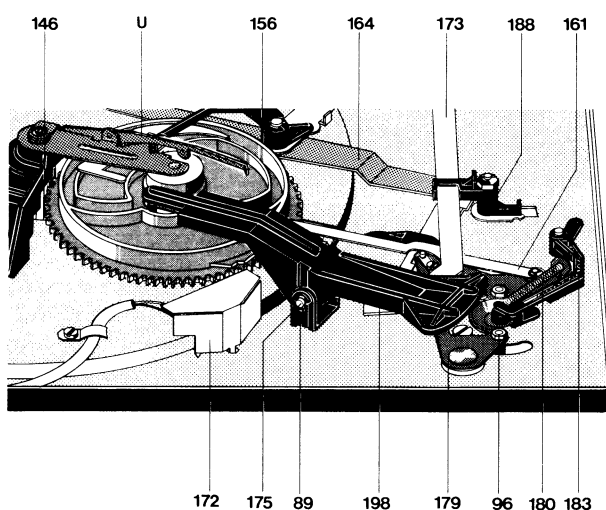
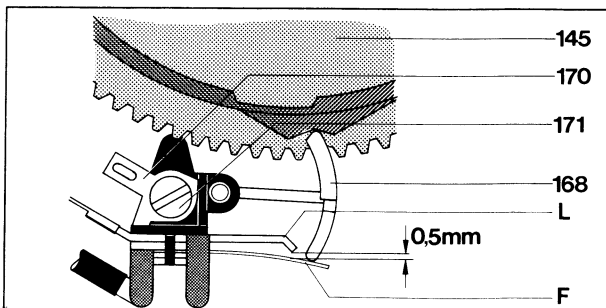


Fig. 18



Muting switch

To prevent disturbing noises during automatic operation of the tonearm the unit is fitted with a muting switch. Control of the switch springs for both channels is effected by the cam wheel. With the unit in neutral state, the muting of the pick-up leads is eliminated.

Adjustment

In zero position of the cam there should be a clearance of approximately 0.5 mm between the contact springs (F) and the shorting strips (L). If necessary the shorting strips should be bent. The contacts should be sprayed with a suitable cleaning agent.

Fig. 19

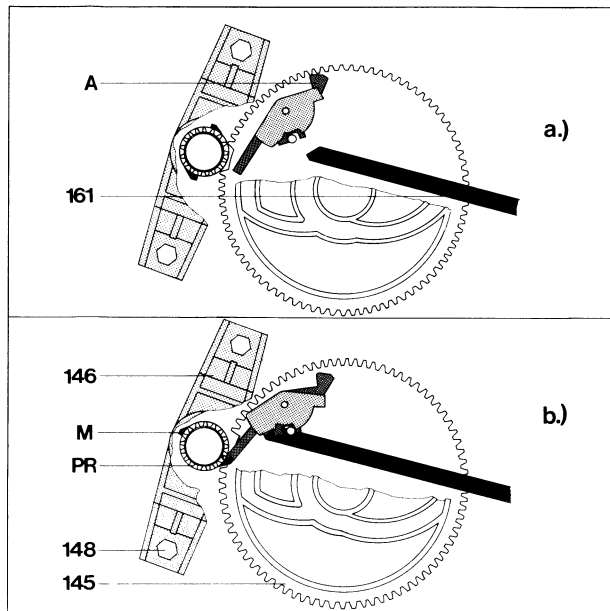
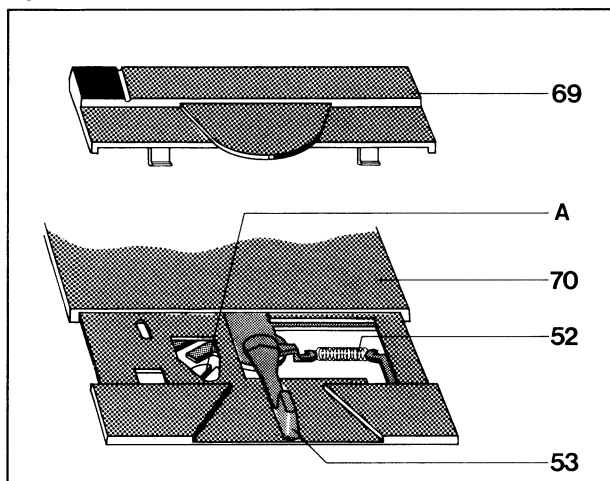


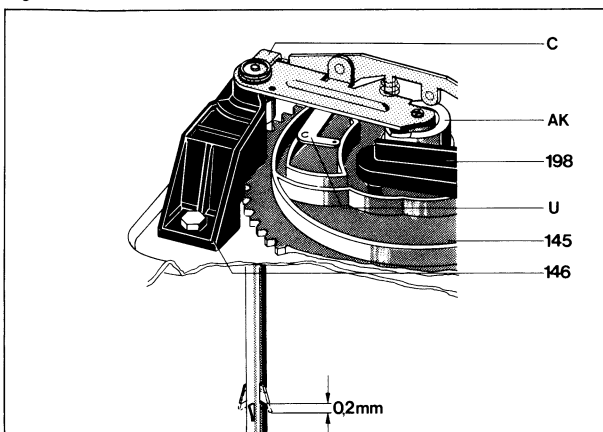
Fig. 20



Release rocker

The lift of the change actuator rod may be changed by bending the release rocker. The change actuator rod is correctly adjusted if, with the cam (145) in zero position, and the change spindle locked in position, the three supports of the change spindle permit a longitudinal movement of 0.2 mm when the change actuator rod is pressed upwards.

Fig. 21



Shut-off and change cycle

The dog (M) on the turntable platter gear (PR) and the shut-off lever (A) actuate both the change cycle at the end of the record as well as the shut-off after the last record in a stack is played. At the end of a record, the tonearm moves towards the centre at an accelerated rate due to the increased pitch of the grooves. This motion carries the shut-off lever (A) towards the dog by means of the shut-off slide (161). The eccentric dog pushes the shut-off lever (A) back at each revolution as long as the tonearm advance is only one normal record groove (Fig. 19 a). The run-out groove with its steeper pitch moves the shut-off lever (A) against the dog with greater force, engaging the shut-off lever (A) and causing the main cam wheel (145) to be driven out of its neutral position by the turntable platter gear (Fig. 19 b).

Shut-off mechanism

Shut-off and change functions are determined by the position of the cam follower lever (U). After every start or record drop, the cam follower lever is brought to its stop position by the main lever (198). (Longer end towards the centre of the main cam). As the record is dropped the cam follower lever (U) is turned to its start position by the cam rocker, so that the tonearm can swing in towards the record and be lowered onto it. If there are no more records on the spindle, the cam rocker remains locked in its lower position and cannot turn the cam follower lever so that the lever remains in its stop position and allows the tonearm to swing to its rest position.

When the main cam wheel (145) returns to its neutral position, the pulley (150) of the switch arm (176) drops into a cutout in the main cam, opening the power switch.

Adjustment

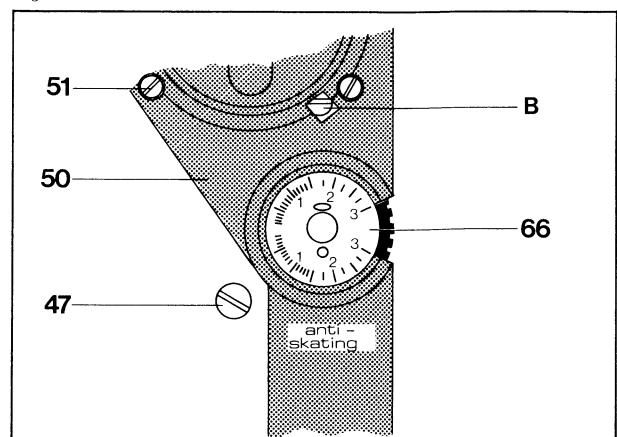
Tonearm set-down point

After removing the notched plate (69) (by pressing it forward and lifting the rear edge first) the adjustment screw (A) is accessible. The stylus set-down point can be varied towards the centre or the outside by turning the adjustment screw to the right or left respectively.

Switch off position

With the tonearm on the tonearm rest, the eccentric (B) can be adjusted to alter the switch-off position. The eccentric is accessible through the hole in the supporting back plate. If the unit switches off too early or not at all, then the eccentric (B) should be turned to the right or left respectively.

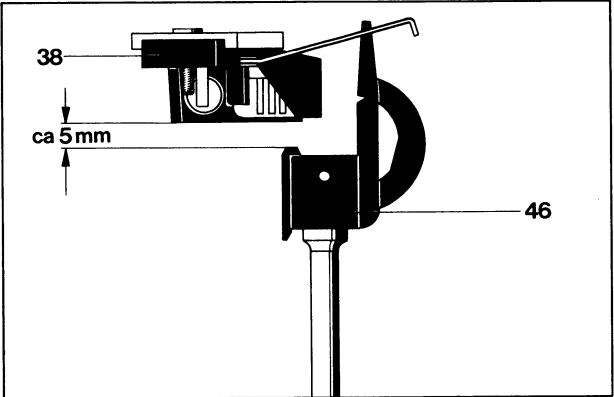
Fig. 22



Tonearm vertical lift

The adjustable sleeve (192) is used to adjust the tonearm vertical lift (for automatic operation). Pull out the mains plug, unlock the tonearm, turn the cam wheel (145) from its zero position until the tonearm reaches its highest point of travel. The tonearm should now be approximately 5 mm above the tonearm rest stop (see Fig. 23). Adjust by means of sleeve (192).

Fig. 23



Defect

After operating the lever the tonearm does not set down or sets down too fast.

Cause

Damping is too great or too slight due to dirt in the silicon oil of the lift tube

Repair

Remove the lift plate assembly (190). Remove the control stud (191). Remove the lock washer (87). Unscrew the adjustment sleeve (192). Remove the locking washer (87). Remove the lifting bolt (194) and the pressure spring (193). Clean the lift tube and lifting bolt. Coat the lifting bolt at the same time with "Wacker Siliconöl AK 300 000". Reassemble the parts.

Rated speed is at the limit of pitch adjustment.

inexact positioning of the belt pulley.

By rotating the regulating button (26) bring the belt pulley (112) into its central position. (The lug of the belt pulley should be visible in the centre of the drive pulley). Adjust the rated speed with the hexagonal screw (111). Turning the hexagonal screw (111) clockwise increases the rated speed. Turning the hexagonal screw anti-clockwise reduces the rated speed.

Replacement parts

Pos.	Part.-No.	Qty.	Description	
1	215 470	1	Automatic Spindle	AS 12
2	213 895	1	Change spindle	AW 3
3	220 213	1	Centering piece	
4	261 910	1	Idling pin	
5	261 912	1	Lock washer complete	
6	261 914	1	Mount complete	
7	248 346	1	Pressure spring	
8	261 916	1	Locking rail complete	
9	249 171	1	Tension spring	
10	248 347	1	Tension spring	
11	248 886	1	Stop	
12	261 970	1	Platter mat complete	
13	248 893	1	Spring washer	
14	261 919	1	Platter complete	1256
15	261 973	1	Platter complete	1257
16	200 543	1	Snap ring	
17	261 920	1	Fly wheel rotor complete	
18	261 921	1	Flat belt complete	
19	231 017	1	Tension spring	
20	239 926	1	Slide	
21	249 407	1	Screw	M 3 x 6
22	261 922	1	Covering panel complete	
23	261 976	1	Stroboscope housing complete	
24	261 977	1	Diode plate complete	
25	249 409	2	LED LD 57 CA	
26	261 923	1	Pitch control covering	
27	249 088	1	Regulating knob one complete	
28	249 083	1	Speed lever	
29	261 924	1	Mounting plate complete	1256
30	261 978	1	Mounting plate complete	1257
31	232 972	1	Spring suspension (Front motor side)	
32	234 815	2	Spring suspension	
33	230 529	3	Threaded piece	
34	230 521	1	Pressure spring (Front motor side)	
35	234 109	2	Pressure spring	

Pos.	Part.-No.	Qty.	Description	
36	200 723	3	Damping rubber	
37	200 722	3	Casing	
38	239 414	3	Transport lock	
39	261 926	1	Tonearm complete	
40	261 928	1	Tonearm head complete	
41	261 929	1	Contact plate complete	
42	261 865	1	1/2 inch conversion kit complete	
43	229 685	2	Pressure spring	
44	249 383	2	Counter nut	
45	229 655	2	Bearing point	
46	230 063	1	Grub screw	
47	261 979	1	Frame complete	
48	210 516	1	Machine screw	M 4 x 8
49	261 930	1	Tonearm rest complete	
50	239 809	1	Adjusting screw	
51	249 096	1	Machine screw	
52	248 979	1	Lifting plate	
53	261 931	1	Rear covering complete	1256
54	261 980	1	Rear covering complete	1257
55	239 193	3	Raised countersunk head screw	M 3 x 6
56	226 357	1	Tension spring	
57	248 888	1	Switchbutton	
58	261 080	1	Decorative cap	
59	261 932	1	Counter weight complete	
60	246 884	1	Counter nut	
61	234 634	1	Grub screw	
62	261 933	1	Bearing race complete	1256
63	261 981	1	Bearing race complete	1257
64	247 325	1	Washer	5,2/10
65	248 989	1	Rotary turn switch complete	
66	249 097	1	Raised countersunk head screw	M 2.5 x 12
67	261 934	1	Spring housing complete	
68	261 935	1	Bearing complete	1256
69	261 983	1	Bearing complete	1257
70	244 103	1	Screw	2.9/6.5

Fig. 24 Exploded view 1

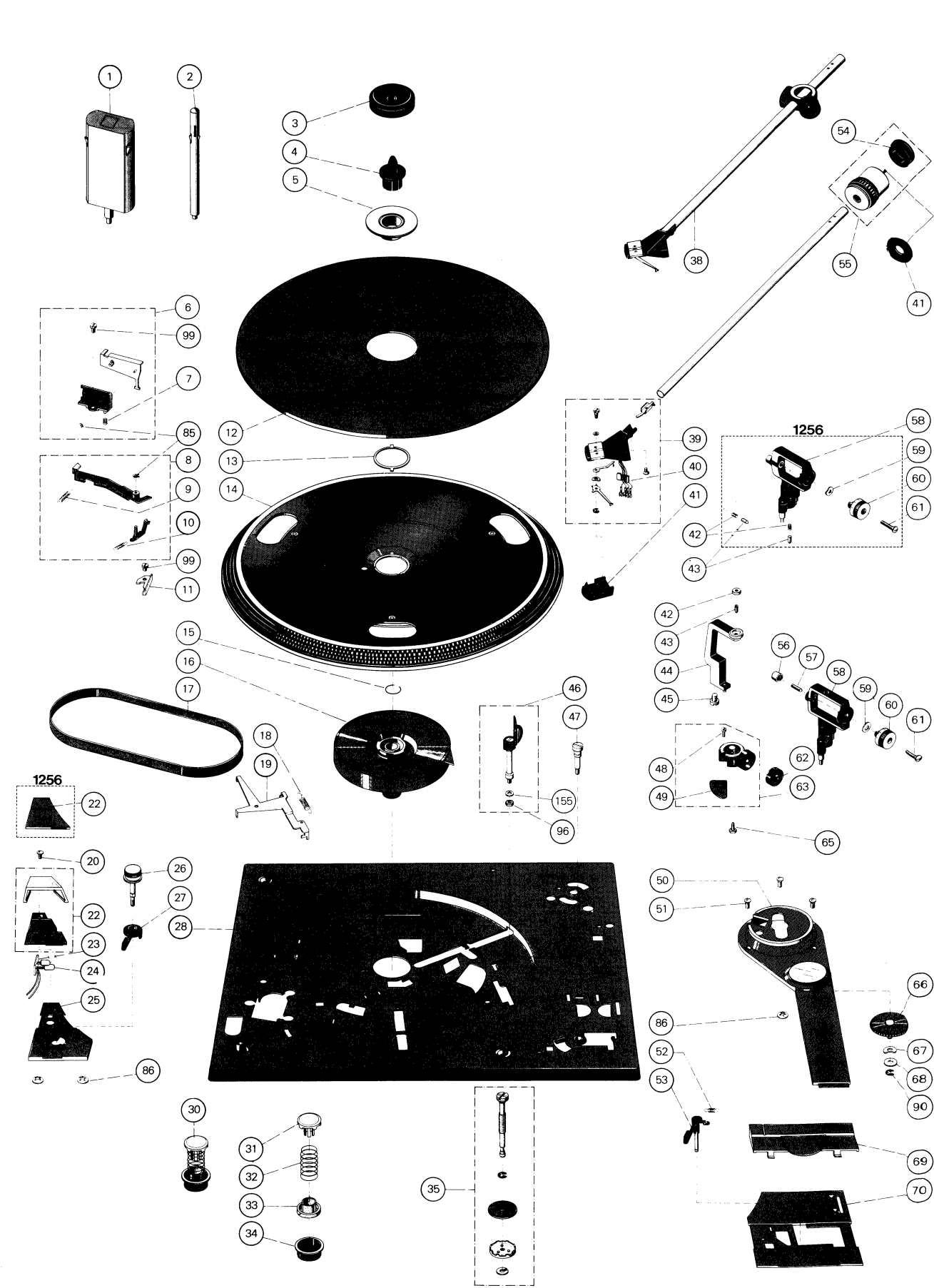
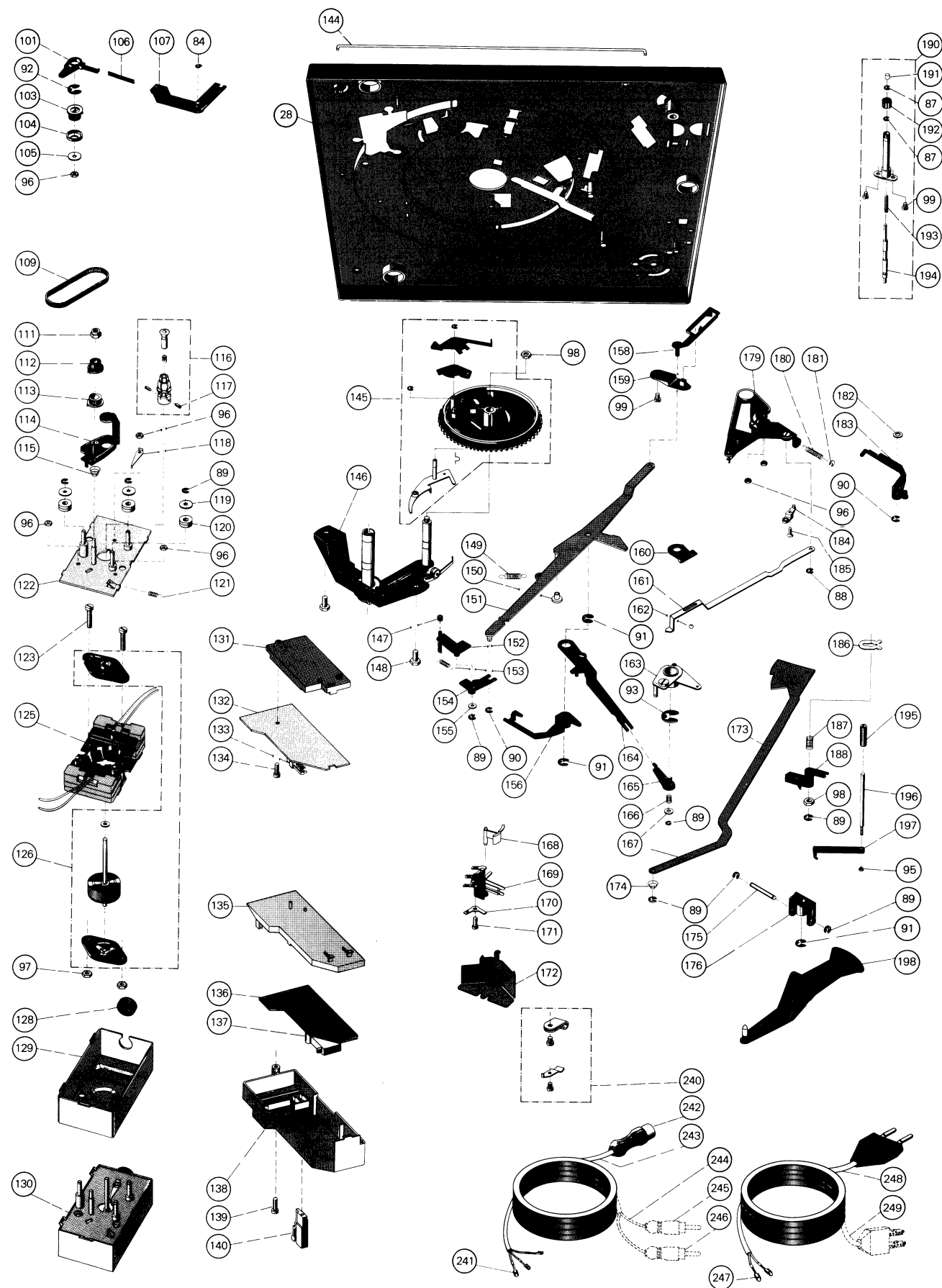


Fig. 25 Exploded view 2



Pos.	Part-No.	Qty.	Description	Pos.	Part-No.	Qty.	Description
66	248 967	1	Cam disc	138	248 881	1	Cover
67	210 182	1	Washer	138	248 882	1	Cover for single-pole plug
68	210 630	1	Washer	139	210 491	1	Machine screw
69	262 112	1	Notched plate complete	140	233 423	2	Single-pole plug
	261 936	1	Notched plate complete	144	239 925	1	Switch rod
70	261 937	1	Front covering	145	261 966	1	Cam wheel complete
84	210 196	1	Grip ring	146	261 968	1	Fly wheel rotor bearing complete
85	210 194	3	Grip ring	147	200 650	1	Rubber sleeve
86	200 444	6	Spring washer	148	218 155	2	Hex screw
87	210 143	3	Washer	149	249 076	1	Tension spring
88	210 144	1	Washer	150	239 931	1	Roller
89	210 145	9	Washer	151	248 891	1	Switch arm complete
90	210 146	3	Washer	152	248 878	1	Switch lever
91	210 147	3	Washer	153	260 363	1	Tension spring
92	210 149	1	Washer	154	248 879	1	Actuation lever
93	232 621	1	Lock washer	155	210 586	1	Washer
95	210 353	1	Hex nut	156	239 933	1	Switch angle
96	210 362	4	Hex nut	158	248 868	1	Pawl
97	222 200	2	Hex nut	159	239 915	1	Plate
98	210 366	5	Hex nut	160	248 869	1	Ball base
99	210 472	5	Machine screw	161	248 873	1	Shut-off rail
101	248 877	1	Switchover bracket	162	209 357	1	Ball
103	232 097	1	Belt pulley 2	163	248 995	1	Adjusting lever complete
104	240 035	1	Washer	164	249 077	1	Switchover lever
105	210 607	1	Washer	165	248 871	1	Switch-on lever
106	248 889	1	Leaf spring	166	248 872	1	Pressure spring
107	248 874	1	Switch lever	167	210 619	1	Washer
109	238 832	1	Toothed belt	168	239 807	1	Contact arm
111	244 104	1	Hex nut	169	242 612	1	Muting switch
112	241 642	1	Belt pulley 1	170	239 806	1	Earth plate
113	241 641	1	Adjustment cam	171	210 486	1	Machine screw
114	248 508	1	Counter bearing complete	172	239 808	1	Screening plate
115	232 615	1	Pressure spring	173	239 936	1	Positioning rail
116	261 938	1	Drive capstan 50 Hz complete	174	243 706	1	Conical spring
	261 939	1	Drive capstan 60 Hz complete	175	200 528	1	Spindle
117	233 137	2	Grub screw	176	239 947	1	Bearing block
118	247 920	1	Earth bracket	179	261 969	1	Segment complete
119	210 600	1	Washer		262 113	1	Segment complete
120	249 182	3	Damping sleeve	180	218 591	1	Tension spring
121	233 777	1	Tension spring	181	201 184	1	Adjusting washer
122	248 507	1	Motor plate complete	182	242 298	1	Washer
123	248 335	2	Machine screw	183	239 917	1	Skating lever
125	261 942	1	Stator 12 V complete	184	239 903	1	Counter bearing
	261 944	1	Stator 110/220 V complete	185	203 475	1	Countersunk screw
	261 946	1	Stator 110/220 V UL/CSA complete	186	239 810	1	Lock washer
126	261 945	1	Armature with bearing complete	187	235 150	1	Pressure spring
128	209 030	1	Wire protective sleeve	188	239 934	1	Guide bearing
129	247 858	1	Screening plate	190	242 613	1	Lift bolt
130	261 948	1	Motor SM 112 complete	191	216 844	1	Control stud
	261 950	1	Motor SM 100 complete	192	218 318	1	Adjusting sleeve
131	249 181	1	Support	193	234 798	1	Pressure spring
132	261 962	1	Switch plate SM 112 complete (without stroboscope)	194	246 152	1	Lifting bolt
	261 963	1	Switch plate SM 112 complete (with stroboscope)	195	237 543	1	Rubber sleeve
	249 188	1	Open micro switch	196	247 440	1	Grip rod
				197	239 909	1	Lift cam
				198	242 616	1	Main lever
				240	231 079	1	Cable clamp
C 1	226 458	1	Capacitor	241	209 436	3	Flat plug
C 2	262 254	1	Capacitor	242	209 424	1	Miniature plug
D 1	249 416	2	Zener diode	243	207 303	1	Cartridge lead
D 2	249 416	2	Zener diode	244	207 301	1	Cynch cartridge lead
R 1	220 582	1	Resistor	245	209 425	1	White cynch plug
				246	209 426	1	Black cynch plug
134	210 488	1	Machine screw	247	214 602	2	AMP plug eyelet
135	248 880	1	Housing	248	232 996	1	European mains lead
136	261 964	1	Switch plate SM 100 complete 50 Hz (no circuit board)	249	232 995	1	USA mains lead
	261 965	1	Switch board SM 100 complete				
137	262 272	1	Switch	227 986	1	CH 6 cover	
				261 867	1	CK 31 agate black console complete	
C 1	241 646	1	Capacitor	261 869	1	CK 31 walnut console complete	
C 2	249 352	1	Capacitor	261 868	1	CK 31 walnut console complete	
C 3	230 355	1	Capacitor	246 079	1	Securing plate	
L 1	242 822	1	RF choke	241 083	1	Shipping carton	
				260 395	1	Shipping carton CS	
R 1	249 354	1	Resistor	249 163	1	Operating instructions ASP 1256	
				249 395	1	Operating instructions ASP 1257	

Lubrication

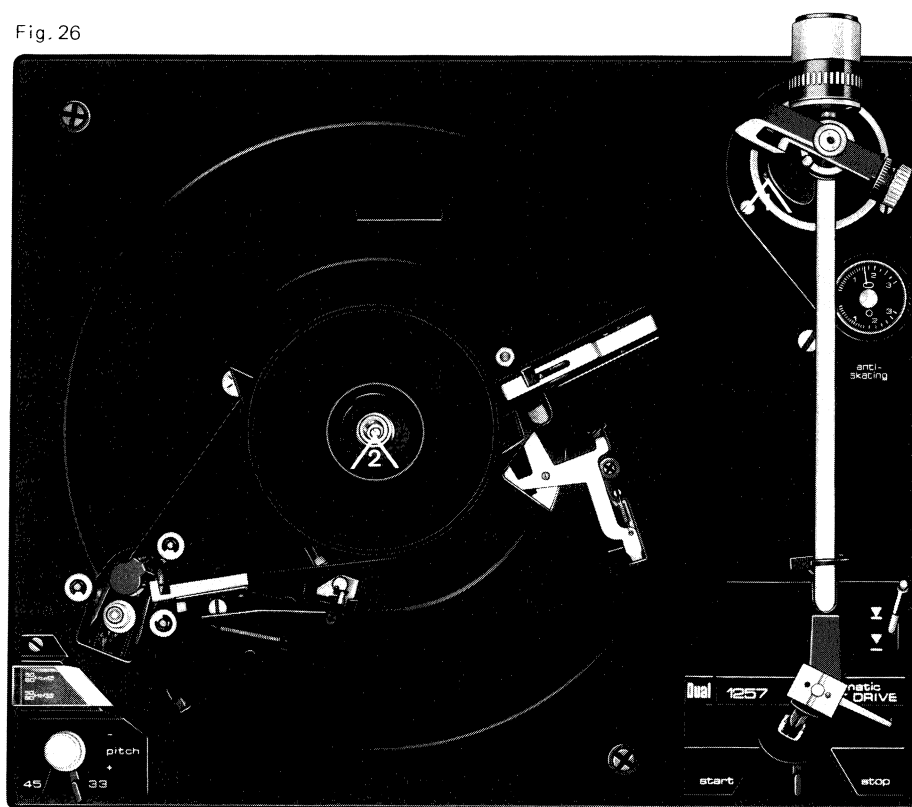
All bearing and friction points of the unit are adequately lubricated at the works. Replenishment of oil and grease is only necessary after approximately 2 years of normal use of the record player as the most important bearing points (motor bearings) have sintered metal bushes.

Bearing points and friction faces should be lubricated sparingly rather than generously.

It is important that no oil grease should come in contact with the friction faces of the flat belt, drive pulley and flywheel rotor, otherwise slip will occur.

When using different lubricants, chemical decomposition can often take place. To prevent lubrication failure we recommend using the original lubricants stated below.

Fig. 26



1

Wacker Siliconeoil
AK 300 000

2

Renotac adhesive oil
No. 343

3

BP Super Viscostatic
10 W/40

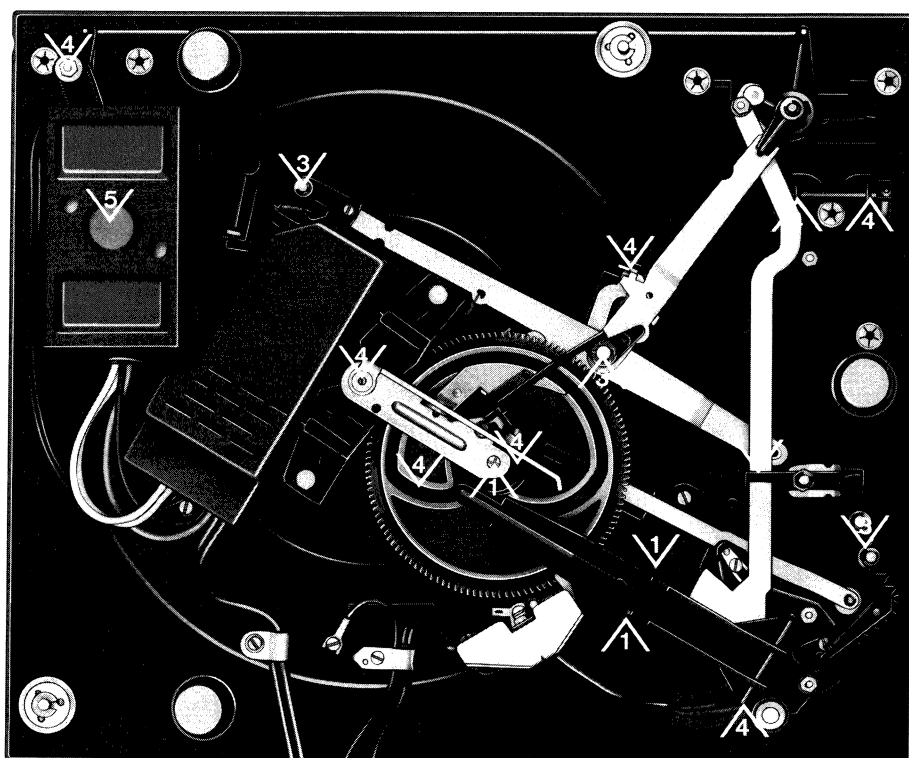
4

Shell Alvania No. 2

5

Isoflex PDP 40

Fig. 27



Lubrication

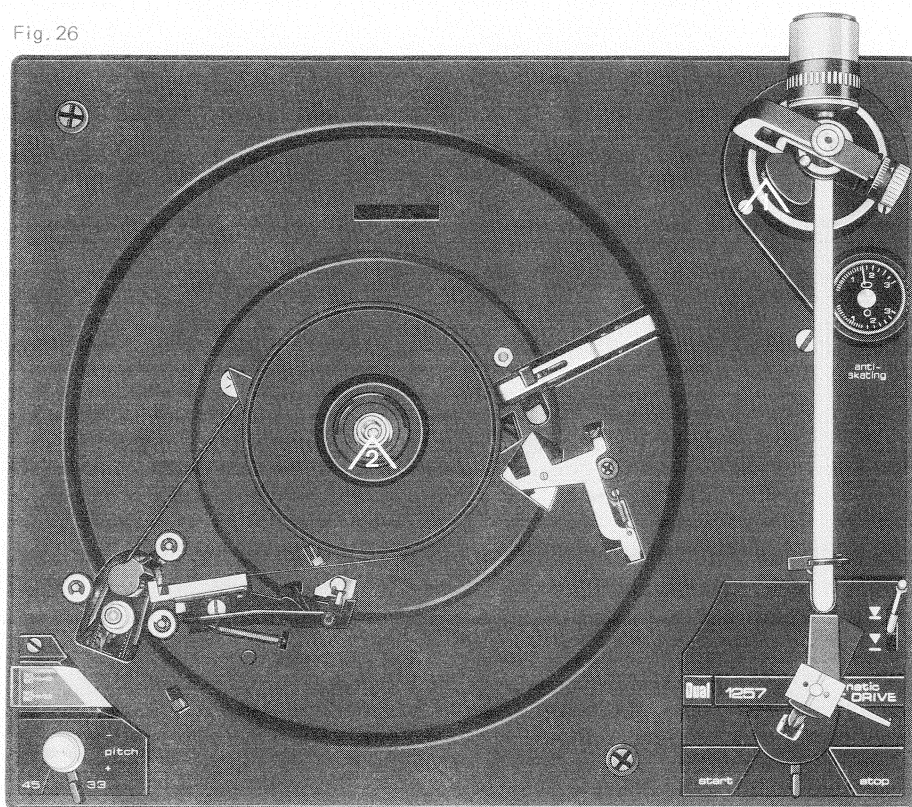
All bearing and friction points of the unit are adequately lubricated at the works. Replenishment of oil and grease is only necessary after approximately 2 years of normal use of the record player as the most important bearing points (motor bearings) have sintered metal bushes.

Bearing points and friction faces should be lubricated sparingly rather than generously.

It is important that no oil grease should come in contact with the friction faces of the flat belt, drive pulley and flywheel rotor, otherwise slip will occur.

When using different lubricants, chemical decomposition can often take place. To prevent lubrication failure we recommend using the original lubricants stated below.

Fig. 26



1

Wacker Siliconeoil
AK 300 000

2

Renotac adhesive oil
No. 343

3

BP Super Viscostatic
10 W/40

4

Shell Alvania No. 2

5

Isoflex PDP 40

Fig. 27

